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10/625,107	07/23/2003	Onur G. Guleryuz	AP169TP	9421

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EXAMINER
CHAWAN, SHEELA C

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/625,107	GULERYUZ, ONUR G.
	Examiner	Art Unit
	Sheela C. Chawan	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _23 July 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-41_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-41_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _23 July 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _7/23/03_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 20050818

DETAILED ACTION

Drawings

1.   The Examiner has approved drawings filed on 7/23/03.

Information Disclosure Statement

2.   The information disclosure statement (IDS) submitted on 7/23/03, the examiner is

considering the information disclosure statement.

Double Patenting

3.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
      A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).
      Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

      Claims 1- 41 of provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 1-29 of

copending Application No. 10/729,663. Although the conflicting claims are not identical,

they are not patentably distinct from each other because. because each of the

limitations of the instant application is defined by the claims of the copending

application. In particularly, claim 1 of the copending application includes each of the

limitations of claim 1 of the instant application. While the copending application claim

includes additional limitations not specifically recited by the claim of the instant

application, the use of the transitional term "comprising" in the instant claim fails to

preclude the possibility of additional features or elements. Therefore, the invention

defined by claim 1 of the instant application is not patentably distinct from the invention

defined in claim 1 of the copending application. Similarly claims 6, 12 and 25 of the

copending application includes each of the limitations of claims 16, 24 and 35 of the

instant application, so that claims 8, 20 and 30 also fail to define a patentably distinct

invention. Furthermore, dependent claims   2- 7, 9- 15, 17- 19, 21- 23, 25-29,31-34, 36-

41 of the instant application are each identical to variously of claims 2-5, 7-11,13-16, 18-

24, 26- 29 of the copending application, and are similarly not patentably distinct.

This is a provisional obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.

As to claim 1, discloses a method of labeling digital image data (see 10/729,663

page 56, line 1 preamble), comprising:

a) detecting edges defined by image data having a first resolution (see,

10/729,663, page 56, lines 4 - 6, receiving multiple images from different branches, and

detecting different resolution, corresponds to first resolution);

b) detecting edges defined by the image data having a second resolution (see,

10/729,663, page 56, lines 4 - 7, receiving multiple images from different branches, and

detecting different resolution, corresponds to second resolution);

c) combining results from a) with results from b) to define intermediate image

data (see, 10/729,663, page 56, line 9, combining data output from the at least

two of the multiple branches); and

d) associating a label with each pixel of the image data (classifying different

groups of the pixel values corresponds to labeling. Classifying a pixel of image data as

one of the plurality of image types is based on plurality of image characteristic for the

pixel is determined based on resolution, see, 10/729,663, page 56, line 10).

As to claim 8, see the rejection of claim 1.

As to claim 16, see the rejection of claim 1.

As to claim 20, see the rejection of claim 1.

As to claim 24, see the rejection of claim 1.

As to claim 30, see the rejection of claim 1.

As to claim 35, see the rejection of claim 1.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under

section 122(b), by another filed in the United States before the invention by the

applicant for patent or (2) a patent granted on an application for patent by another filed

in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the

effects for purposes of this subsection of an application filed in the United States only if

the international application designated the United States and was published under

Article 21(2) of such treaty in the English language.

Claims 1-29, 31-39, and 41 are rejected under 35 U.S.C. 102(b) as being

anticipated by Triplett et al., (US. 6,347,153 B1).

As to claim 1,Triplett discloses a method of labeling digital image data

(classifying different groups of the pixel values correspond to labeling. Classifying a

pixel of image data as one of the plurality of image types is based on plurality of image

characteristic for the pixel is determined based on resolution, abstract, fig 10, column

24, lines 10- 28, column 25, lines 46- 61) digital image data (column 9, lines 17-23,

(column 10, lines 13-20) comprising:

a) detecting edges defined by image data having a first resolution (fig 2, item 30

corresponds to multiple branches, column 6, lines 24- 37, column 10, lines 21- 32, 51-

65, column 38, lines 55- 65);

b) detecting edges defined by the image data having a second resolution

(column 38, lines 43- 65);

c) combining results from a) with results from b) to define intermediate image

data (fig 2, item 41, mixer corresponds to combining multiple branches, column

11, lines 10- 29, column 39, lines 27- 43, column 40, lines 1-5); and

d) associating a label with each pixel of the image data (note, a computer

workstation program is used in accordance with document creation application software

or from a data storage device, column 9, lines 17-23, column 40, lines 38- 44, column

38, lines 43- 67).

As to claim 2,Triplett discloses the method wherein the method operation of detecting edges defined by image data having a first resolution includes, filtering the image data through a low pass filter (column 38, lines 43-54, 55-65).

As to claims 3 and 36, Triplett discloses the method wherein the method operation of detecting edges defined by image data having a first resolution includes, suppressing halftone dots (column 38, lines 22-53).

As to claim 4, Triplett discloses the method wherein the method operation of combining results from a) with results from b) to define intermediate image data includes, performing a logical AND operation with the results from a) and the results from b) (column 6, lines 6-21, column 13, lines 26- 33).

As to claims 5 and 37, Triplett discloses the method wherein the method operation of combining results from a) with results from b) to define intermediate image data includes,

selecting halftone dots from data resulting from the logical AND operation (column 6,lines 6-21, column 13, lines 26- 33).

As to claims 6 and 19,Triplett discloses the method wherein the method operation of associating a label with each pixel of the image data includes (column 30, lines 30-53), defining a neighborhood around each pixel of the intermediate image data (column 27, lines 2-7, column 35, lines 10-24);

counting values in the neighborhood data (column 27, lines 2-7, column 35, lines 10-24); and

determining a region type associated with the neighborhood a value count (column 30, lines 30-53).

As to claims 7 and 33, Triplett discloses the method of wherein the operation of associating a label with each pixel of the image data includes, eliminating bleed-through (column 6, lines 46-57, column 30, lines 14-25).

As to claim 8, Triplett discloses a method for labeling and enhancing documents defined through digital data, comprising;

detecting edge data defined in a portion of the document (column 38, lines 43-45, 55-65);

identifying a region type associated with the portion of the document (column 11, lines 5- 20); and

labeling a pixel associated with the edge data based upon both the region type and a pixel neighborhood value (column 35, lines 10-37).

As to claims 9 and 25,Triplett discloses the method of wherein the digital data defining the document results from a scanning operation (fig 1, element 38, column 6, lines 38-45).

As to claims 10 and 21, Triplett discloses the method, wherein the method operation of detecting edge data defined in a portion of the document includes (column 9, lines 17-23, column 10, lines 13-20);

detecting the edge data at multiple resolutions in a single pass (column 24, lines 10-28, column 25, lines 46-61).

As to claims 11 and 22, Triplett discloses the method wherein the method operation of detecting edge data defined in a portion of the document includes;

suppressing halftone dots prior to detecting the edge data (column 38, lines 43-54, 55-65).

As to claims 12, 23,29 and 32, Triplett discloses the method wherein the method operation of identifying a region type associated with the portion of the document includes (column 10, lines 13-20, column 36, lines 14-26), defining a neighborhood around the pixel (column 27, lines 2-7, column 30, lines 30-53;

counting values of the neighborhood (column 30, lines 29-67, column 35, lines 10-24); and

comparing the values to a threshold value (column 2, lines 53-65, column 31, lines 1-35).

As to claim 13,Triplett discloses the method wherein if a number of values is greater than the threshold value, then the neighborhood is a halftone neighborhood, (column 4, lines 53-63, column 39, lines 27-43, column 16, lines 59-67, column 17, lines 1-26, column 40, lines 1-5).

As to claim 14,Triplett discloses the method wherein the method operation of labeling a pixel associated with the edge data based upon both the region type and a pixel neighborhood value includes (column 35, lines 10-37)

substantially eliminating bleed-through (column 6, lines 46-57, column 30, lines 14-25).

As to claim 15, Triplett discloses the method wherein the method operation of substantially eliminating bleed-through includes (column 6, lines 46-57, column 30, lines 14-25),

identifying a non-halftone region (column 35, lines 10-37);

defining a neighborhood in a non-halftone regions (column 30, lines 30-53); calculating a variance associated with pixels in the neighborhood, wherein a value of the variance determines whether the neighborhood is a constant tone neighborhood column 18, lines 21-34, column 29, lines 45-62).

As to claim 16, see the rejection of claim 1.

As to claim 17, Triplett computer readable medium wherein the program

instructions for detecting edges defined by image data having a first resolution includes (column 9, lines 17-23) program instructions for filtering the image data through a low pass filter (column 46, lines 38-44).

As to claim 18, Triplett discloses computer readable medium of claim 16, wherein the program instructions for detecting edges defined by image data having a first resolution includes, program instructions for suppressing halftone dots (column 9, lines 17-23, column 46, lines 38-44).

As to claim 20, see the rejection of claim 8.

As to claim 24, see the rejection of claim 1.

As to claim 26, Triplett discloses the method wherein the method operation of processing the image data at both a first scale and a second scale includes (fig 11 and 12 illustrating a scalable image classification system),

filtering the image data for the first scale (column 40, lines 45- 62);

performing edge detection on the filtered image data (column 6, lines 24-37, 46-57, column 10, lines 21-32, 51-65, column 20, lines 1-9);and

performing edge detection on the image data at the second scale, wherein the processing occurs in a single pass (column 38, lines 43-67).

As to claim 27,Triplett discloses method wherein the method operation of processing the image data at both a first scale and a second scale includes, processing the image data in one of a banded fashion' and a blocked based fashion (column 4, lines 10-26, fig 3, corresponds to block image pixel stored in buffer).

As to claim 28,Triplett discloses the method of wherein the region types are selected from the group consisting of fine edge (column 4, lines 18-26), course edge (column 6, lines 46-57) halftone, and constant tone (abstract, column 1, lines 17-26, 27-38, column 25, lines 46-61,column 7, lines 2-10).

As to claim 31, Triplett discloses the microprocessor wherein the circuitry for labeling each pixel of the image data includes,

circuitry for low pass filtering the image data (column 27, lines 8-20);

circuitry for detecting edges of both low pass filtered image data and non-low pass filtered image data (column 27, lines 8-20, column 29, lines 23-27); and

circuitry for combining data corresponding to detected edges associated with lowpass filtering and detected edges associated with non-low pass filtering (column 11, lines 10-29, column 39, lines 27-43, column 40, lines 1-5).

As to claim 34, Triplett discloses microprocessor of wherein the circuitry for substantially eliminating bleed-through artifacts includes,

circuitry for calculating a variance associated with pixels representing a portion of the image data (column 8, lines 21-34, column 29, lines 45-62).

As to claim 35, see the rejection of claim 1.

As to claim 38, Triplet discloses the image replication device wherein the labeling module includes logic configured to count pixels in the halftone dot locations to identify halftone pixels (column 11, lines 10-29, column 37, line 41 through column 38, line 9, column 39, lines 27-43, column 40, lines 1-5).

As to claim 39, Triplett discloses the image replication device wherein the labeling module includes logic configured to calculate a variance in non-halftone dot location to identify constant tone region pixels (column 18, lines 21-34, column 29, lines 45-62, Column 30, lines 30-53).

As to claim 41,Triplett discloses the image replication device further comprising: a scanner (fig 2) in communication with a copier pipeline, the copier pipeline including the labeling module (column 3, lines 48-52, column 4, lines 7-9, column 39, lines 1-26); and

a printer in communication with the copier pipeline (column 4, lines 7-9, column 39, lines 1-26).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
>
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
>
> the prior art are such that the subject matter as a whole would have been obvious at the time the
>
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
>
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 30 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Triplett et al., (US. 6,347,153 B1), as applied to the claims 1-29,31-39 and 41

above and further in view of Lavallee et al., (US.4,288,821).

Regarding claim 30, Triplett discloses a microprocessor configured to segment

and enhance image data associated with a compound document (column 6, lines 24-37,

column 38, lines 43-54), comprising:

circuitry for labeling each pixel of the image data (column 1, lines 17-38, column 30,

lines 14-25);

circuitry for enhancing each identified segment of the image data (column 6, lines 24-

37).

Triplett is silent about descreening halftone regions of the image data.

Lavallee discloses a signal processing architecture for image filtering to improved

signal processing architecture for image filtering employing multiple scanning arrays of

differing resolution. The system comprising:

circuitry for descreening (fig 3, item 52) halftone regions of the image data (

abstract, column 1, lines 27- 47, column 3, lines 13- 61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to have modified Triplett to include a descreening module configured to

descreen data associated with the halftone region that is received from the labeling

module, the descreening module further configured to output the filtered image data

corresponding to one of the different resolutions. It would have been obvious to one of

ordinary skill in the art at the time of the invention to have modified Triplett by the

teaching of Lavallee in order to improve signal processing architecture for image filtering

employing multiple scanning arrays of differing resolution, (as suggested by Lavallee at

column 1, lines 5- 9).

Other prior art cited

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Williams et al., (US.6,229,923 B1) discloses method and system for classifying

and processing of pixel of image data.

Clouthier et al., (US.5, 949, 964) discloses method and apparatus for halftoning

of images in a printer.

Williams (US.5,327,262) discloses automatic image segmentation with

smoothing.

Contact Information

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sheela C Chawan whose telephone number is. 571-

272-7446. The examiner can normally be reached on Monday - Friday 7.30 - 4.00.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Mehta can be reached on 571-272-7453 . The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Sheela Chawan
Patent Examiner
Group Art Unit 2625
August 19, 2005